

### **DETAILED ACTION**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Dorchak on 04/09/09.

### **EXAMINER'S AMENDMENT**

The application has been amended as follows:

**Amendments to the Specification:**

On Page 1, please replace the first full paragraph with the following rewritten paragraph:

The invention relates to a container with a base body comprising a base plate and side walls standing up therefrom in an at least approximately perpendicular arrangement and with wells disposed in the base body, a unit for dividing a volume of a container into part-regions and a crystallisation crystallization device having the features outlined in the introductory parts of claims 1, 18 and 27, as well as the use of the container, the unit and the crystallisation crystallization device as outlined in claims 28 to 30.

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On Page 4, please replace the last full paragraph with the following rewritten paragraph:

This objective is achieved by the ~~invention on the basis of~~ the container ~~defined in the characterising part of claim 1 in~~ accordance with the invention. The fact that the wells are provided in the form of recesses in the base plate has proved to be an advantage because the level of the covering hydrophobic liquid does not need to be as high. Firstly, this low level of hydrophobic liquid prevents the liquid seeping along the side walls of the container due to capillary action, thereby avoiding any risk of contamination, for example due to work surfaces that have not been cleaned, both for the laboratory personnel and for other analyses. Secondly, costs are reduced as a result of the smaller amount of hydrophobic liquid needed. A lower level of hydrophobic liquid is also conducive to the ~~crystallisation behaviour~~ crystallization behavior of the bio-macro molecules because the ~~crystallisation~~ crystallization process starts more quickly. Another advantage is the fact the volume of both the precipitation solutions needed for the reaction and the bio-macro molecule to be ~~analysed~~ analyzed is smaller.

On Page 5, please replace the first full paragraph with the following rewritten paragraph:

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~~As defined in claim 2~~ In accordance with an embodiment of the invention, the fact that the wells have the same disposition, identical movements parallel with the support surface are advantageously always effected relative to the same reference points of the wells, even for different wells, when the container is manipulated on an automated basis.

On Page 5, please replace the second full paragraph with the following rewritten paragraph:

Also of advantage is the fact that many different bio-macro molecules can be ~~analysed~~ analyzed at the same time, ~~as defined in claim 3~~ accordance with an embodiment of the invention.

On Page 5, please replace the third full paragraph with the following rewritten paragraph:

~~An~~ In an advantageous embodiment ~~is defined in claim 4,~~ whereby the ~~standardised~~ standardized layout of the conical or cylindrical wells makes for a container of a design which is very economical on space. Particularly good use is made of all the available space by the wells.

On Page 5, please replace the fourth full paragraph with the following rewritten paragraph:

Also of advantage is an embodiment ~~as defined in claim 5,~~

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whereby only a small quantity has to be used for the reaction. Using small quantities means that an analysis is particularly cost effective.-

On Page 5, please replace the fifth full paragraph with the following rewritten paragraph:

~~An Another embodiment as defined in claim 6~~ is of advantage because the regular layout of the wells makes the container very easy to process. The process of filling the wells is facilitated and the sample can be easily observed during processing and harvesting of the crystals.

On Page 5, please replace the sixth full paragraph with the following rewritten paragraph:

~~The Another embodiment defined in claims 7 and 8~~ has proved to be of particular advantage because the formation of bio-macro molecules can be improved by means of a surface treatment.

On Page 5, please replace the seventh full paragraph with the following rewritten paragraph:

The design of the container ~~defined in claim 9 of another embodiment~~ has advantages, whereby the wells are curved in an at least approximately convex arrangement, the advantage of which is that liquid drops are more easily accommodated in wells of this shape and the drops migrate more readily to the ~~centre~~ center of the well. When placing a liquid drop in position, the surface tension due to the adhesion between the walls of a recess and the boundary surface of the liquid drop has less of a

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counteracting effect, the more closely the shape of the recess conforms to the approximately spherical curvature of a drop of liquid.

On Page 6, please replace the first full paragraph with the following rewritten paragraph:

The advantage of ~~the another~~ embodiment ~~defined in claim 10~~ is that it facilitates automated processing of the container and in particular of the wells for the purpose of ~~crystallising~~ crystallizing bio-macro molecules.

On Page 6, please replace the second full paragraph with the following rewritten paragraph:

An Another embodiment ~~defined in claim 11~~ has also proved to be of advantage because it enables a visual control during the work process and during incubation of the container. Consequently, once the reaction mixture has been prepared, it is easier to intervene in the reaction.

On Page 6, please replace the third full paragraph with the following rewritten paragraph:

Also of advantage is ~~the an~~ embodiment ~~defined in claim 12,~~ whereby the partially non-transparent design prevents stray light which might distort the measurement results during detection.

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On Page 6, please replace the fourth full paragraph with the following rewritten paragraph:

Also of advantage is an embodiment ~~as defined in claim 13,~~ whereby the drops in the wells are prevented from shifting or sliding, even though their walls are of a minimum height of only 0.1 mm, for example, thereby ensuring that the bio-macro molecule remains in the same position during the reaction and analysis process.

On Page 6, please replace the fifth full paragraph with the following rewritten paragraph:

Another embodiment ~~defined in claims 14 and 29~~ is of advantage because the materials are resistant to organic solvents such as acetone, benzene, acetonitrile, dioxan, 2,2,2 trifluoro-ethanol, for example. They are also compatible with various salts, buffers and polymers which are frequently used for ~~crystallisation~~ crystallization purposes. Polypropylene and cyclo-olefin copolymers (COC) are also less permeable to water ~~vapour~~ vapor and therefore less susceptible to the effect of evaporation than containers made from polystyrene, for example.

On Page 6, please replace the sixth full paragraph with the following rewritten paragraph:

Also of advantage is an embodiment ~~defined in claim 15,~~ whereby the use of different plastics to make the container enables different properties to be obtained. For example, the wells need only be resistant to stress caused by organic solvents, whereas the side walls do not have to satisfy this

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requirement.

On Page 6, please replace the seventh full paragraph with the following rewritten paragraph:

~~As defined in claim 16~~ In another embodiment, the container is easy to orient when working with it. Furthermore, by marking the container accordingly, an internal control system and orientation system can be incorporated for automated processing.

On Page 7, please replace the first full paragraph with the following rewritten paragraph:

Also of advantage is another embodiment ~~defined in claim 17,~~ whereby the selected production method enables the container to be manufactured rapidly and inexpensively.

On Page 7, please replace the second full paragraph with the following rewritten paragraph:

An Another embodiment ~~as defined in claim 18~~ has proved to be of advantage, whereby the ~~standardised~~ standardized dimensions of the container enable the jobs which have to be carried out with the container to be automated. The possibility of automating processing means that a large number of samples can be ~~analysed~~ analyzed simultaneously. Since the layout of the wells conforms to the SBS standard, a very high density of wells is also obtained. Another advantage is the fact that automation enables several wells to be filled at the same time. Yet another advantage of this embodiment is the fact that the same filling and test systems as those used with micro-titre plates can be

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used for the container proposed by the invention because the number of wells is standardised standardized.

On Page 7, please replace the third full paragraph with the following rewritten paragraph:

An embodiment ~~defined in claim 19~~ has proved to be of advantage, whereby the recess can be filled with a liquid, and evaporation of the ~~crystallisation~~ crystallization reagents and hydrophobic liquid reduced, which means that the concentrations of these reagents can be kept constant during the entire reaction process and analysis process.

On Page 7, please replace the fourth full paragraph with the following rewritten paragraph:

~~An~~ Another embodiment ~~defined in claim 20~~ has proved to be of advantage because it incorporates at least one retaining element, which means that the unit for dividing a volume of a container into part-regions has to be placed in a predefined position, thereby ensuring that the experiment is more readily reproducible.

On Page 7, please replace the fifth full paragraph with the following rewritten paragraph:

The objective of the invention is also independently achieved by the unit ~~defined in accordance with the characterising part of claim 21 invention~~. The advantage of this approach is that by placing the unit in the container, fluctuations in the liquid level can be kept to a minimum when transporting the container. Another advantage is the fact that

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fluctuations in the hydrophobic liquid coating the wells can be compensated. During both manual and automated processing of the container, it is constantly susceptible to slight vibrations, which can shift the position of the bio-macro molecule and could thus disrupt the ~~erystallisation~~ crystallization process. Using the unit ensures that the positioning of the bio-macro molecule in the recess can be kept constant during the entire ~~erystallisation~~ crystallization process, which can last several days and even a few months, even if the container has to be moved from one place to another several times.

On Page 8, please replace the second full paragraph with the following rewritten paragraph:

This being the case, an embodiment ~~defined in claim 22~~ is of advantage, whereby greater strength can be imparted to the unit. As a result of the increase in strength, the unit can be manipulated during the experiment. Furthermore, once it has been thoroughly cleaned, it can be used several times for different experiments.

On Page 8, please replace the third full paragraph with the following rewritten paragraph:

As a result of ~~the another~~ embodiment ~~defined in claim 23~~, a flow connection can be established between the part-regions. As a result of this flow connection, differences in concentration between the part-regions can be compensated, thereby guaranteeing the same reaction conditions throughout the entire container.

On Page 8, please replace the fourth full paragraph with

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the following rewritten paragraph:

~~As defined in claim 24 In another embodiment,~~ conformity is achieved in the layout of the wells in the container, thereby facilitating automated processing.

On Page 8, please replace the fifth full paragraph with the following rewritten paragraph:

This being the case, another embodiment ~~defined in claim 25~~ has proved to be of advantage because the fact that the webs are spaced at a sufficient distance from the support surface enables the quantity of hydrophobic liquid to be distributed over the entire base plate of the container, thereby establishing a flow connection between the individual part-regions.

On Page 8, please replace the sixth full paragraph with the following rewritten paragraph:

Another embodiment ~~defined in claim 26~~ has proved to be advantage, whereby a fluid-tight barrier for the hydrophobic liquid is obtained when the webs are placed against the base plate. Consequently, when the webs are placed against the base plate, many different hydrophobic liquids, such as silicone oil or paraffin oil can be tested on a base plate or, for example, many different ratios of the hydrophobic liquid can be tested relative to one another, such as silicone oil to paraffin oil in a ratio of 1:1 or 1:2 or 2:1, etc.. Another advantage is the fact that by creating the part-regions, a row can be used for diluting different reagents involved in the reaction, for example the precipitation solution, for test purposes.

On Page 9, please replace the first full paragraph with the

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following rewritten paragraph:

Another embodiment ~~defined in claim 27~~ is also of advantage because the fact that the unit is spaced apart from the side walls makes it easier to insert the unit in and remove it from the container. Another advantage is the fact that because spacers can be used, the frame does not have to be exactly adapted in the container.

On Page 9, please replace the second full paragraph with the following rewritten paragraph:

Also of advantage is an embodiment ~~defined in claim 28~~, whereby the unit is made easier to manipulate, especially easier to insert in and remove from the container.

On Page 9, please replace the third full paragraph with the following rewritten paragraph:

The objective of the invention is also independently achieved as a result of the ~~crystallisation crystallization~~ device ~~defined by the features outlined in accordance with the characterising part of claim 30 invention~~. The advantage of this approach is that both reagent consumption and consumption of the bio-macro molecules can be reduced to a minimum. Another advantage is the fact that experiments with the same starting substance can be repeated several times, thereby obviating the need for lengthy processes to produce more of the bio-macro molecule. Also of advantage is the fact that the same bio-macro molecule obtained from an isolation process can be used several times, thereby ruling out differences in the analysis results due to different isolation conditions.

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On Page 9, please replace the fourth full paragraph with the following rewritten paragraph:

The objective of the invention is also independently achieved by using the container as defined by the features outlined in accordance with the characterising part of claim 31 invention. The advantage of this approach is that a plurality of proteins can be ~~crystallised~~ crystallized simultaneously under the same conditions.

On Page 9, please replace the fifth full paragraph with the following rewritten paragraph:

The objective of the invention is also independently achieved by using the device as defined by the features outlined in accordance with the characterising part of claim 32 invention. The advantage of this approach is that the unit acts in the manner of a breakwater for the hydrophobic liquid.

On Page 9, please replace the sixth full paragraph with the following rewritten paragraph:

The objective of the invention is also independently achieved by using the ~~crystallisation~~ crystallization device as defined by the features outlined in accordance with the characterising part of claim 33 invention. The advantage of this is that the large number of ~~crystallisation~~ crystallization experiments which can be carried out in a short time prevents any degradation of the bio-macro molecule. Furthermore, various different ~~crystallisation~~ crystallization conditions for a bio-macro molecule can be tested simultaneously.

***Telephonic Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie whose telephone number is 571-272-1447. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/B. R./

/Walter D. Griffin/  
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